

ABSTRACT

Methods and systems for removing copper from ferrous scrap are described. Some amounts of copper in ferrous scrap are removed by oxidation and subsequent mechanical impact of the oxidized scrap. Further removal of copper from the solid scrap can be achieved by fluxing the copper oxide below the melting point of ferrous scrap using $\text{CaO-SiO}_2\text{-B}_2\text{O}_3$ - and $\text{Na}_2\text{O-SiO}_2\text{-B}_2\text{O}_3$ -based slags. Using the invention, copper can be removed from ferrous scrap in a natural, cost-effective, and environmental-friendly manner.